## ABSTRACT

Providing a virtual device container to virtually extend the functionality of a network device on a network for supporting a plurality of functional application modules residing in a server on the network, including receiving a function request sent from one of the functional application modules, the function request corresponding to the network device, and selecting one of a plurality of functional component modules in response to the function request, each of the functional component modules corresponding to a respective one of the functional application modules, the selected functional component module corresponding to the functional application module which sent the function request. The virtual device container also includes executing the selected functional component module according to the function request, wherein each functional component module communicates with the corresponding functional application module through a first interface and communicates with the network device through a second interface.